Name:

at1110paper_practice_test (v101)

1. Solve the equation.

$$6x^2 - 26x + 27 \;=\; 3x^2 + 2x - 5$$

$3x^2 - 28x + 32 = 0$

$(3x - 4)(x - 8) = 0$

$x = \frac{4}{3} \qquad x = 8$

2. Expand the following expression into standard form.

$$(2x - 9)(7x + 8)$$

$14x^2 + 16x - 63x - 72$

$14x^2 - 47x - 72$

3. Expand the following expression into standard form.

$$(4x - 3)(4x + 3)$$

$16x^2 + 12x - 12x - 9$

$16x^2 - 9$

4. Solve the equation.

$$(4x - 7)(9x - 8) \;=\; 0$$

$x = \frac{7}{4} \qquad x = \frac{8}{9}$

5. Factor the expression.

$$16x^2 - 9$$

$$(4x - 3)(4x + 3)$$

6. Expand the following expression into standard form.

$$(7x + 5)^2$$

$$49x^2 + 35x + 35x + 25$$
$$49x^2 + 70x + 25$$

7. Factor the expression.

$$x^2 - 13x + 42$$

$$(x - 6)(x - 7)$$

8. Solve the equation with factoring by grouping.

$$15x^2 + 20x + 18x + 24 \;=\; 0$$

$$(5x + 6)(3x + 4) = 0$$
$$x = \frac{-6}{5} \qquad x = \frac{-4}{3}$$